

MAJEWSKI, Wieslaw

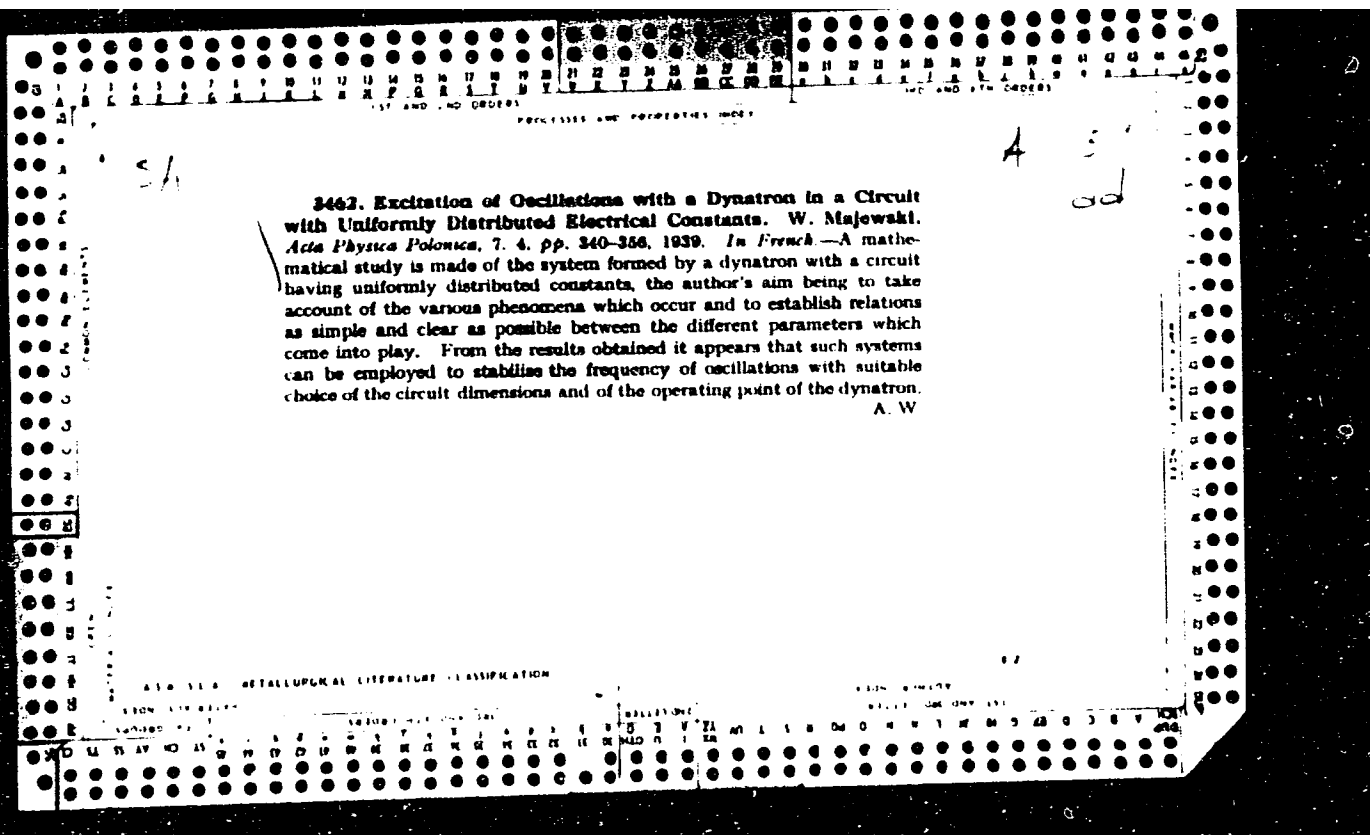
Investigations on the effectiveness of immobilizing dressings
clavicular fractures. Pol. przegl. chir. 37 no. 12:1260-1264
D ' 65.

1. **Z** I Kliniki Chirurgicznej AM w Gdarsku (Kierownik: prof.
dr. H. Kania [deceased]).

BC

Technique of the measurement of secondary emission of electrons. W. MAJEWSKI (Acta Phys Polon., 1939, 7, 327-339).—Two types of valve suitable for the study of secondary electron emission are described.

O. D. S.



MAJEWSKI, W.

On the possibility of neutral currents in four-fermion interactions.
Bul Ac Pol mat 8 no.2:95-98 '60. (EEAI 9:12)

1. Institute of Physics, Polish Academy of Sciences. Presented by
L. Infeld.
(Fermions) (Nuclear reactions)

MAJEWSKI, W.

On the polarization of neutrons from muon capture by the nucleus.
Bul Ac Pol mat 8 no.7:467-470 '60.

1. Institute of Physics, Polish Academy of Sciences. Presented by
L. Infeld.

(Neutrons) (Polarization(Electricity))

19

P/045/60/014/004/002/001
B022/B070

24.6900

AUTHOR: Majewski, W

TITLE: Universal Fermi Interaction in Muon Capture 19

PERIODICAL: Acta Physica Polonica, 1960, Vol. 19, No. 4, pp. 5-5 530

TEXT: The idea of the universality of weak interactions leading to four-fermion processes expressed ten years ago (Ref. 1) has won strong experimental and theoretical support in the last two years. If the idea of universality is correct, then the μ capture process (least studied up to now) must be described by the V-A interaction with conservation of vector currents. The effect of the latter, if it exists, must manifest itself more significantly because of the larger momentum transfer. In the present paper, the process of muon capture is considered from the point of view of the examination of V-A coupling and, particularly of the vector-current conservation hypothesis. The angular asymmetry of neutrons from the capture of polarized μ mesons in complex nuclei is estimated by assuming the applicability of the Fermi gas model of the nucleus. A numerical estimate from the formula derived leads to the

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Universal Fermi Interaction in Muon Capture P/045/60/019/004/000/001
BC22/B070

result that the effect of vector current conservation increases the capture rate by 17%; still greater is the influence on the asymmetry parameter, which increases by 33%. It is also found that the vector-current conservation hypothesis increases the singlet (of μ mesic atoms) capture rate by 11% in comparison with the ordinary V-A theory. Calculations show that neutron asymmetry is largely conserved for muon capture in complex nuclei (67-80% of that in hydrogen); then experimental observation of this asymmetry may be expected, and the vector current conservation may also be checked. The three experimental results reported on neutron asymmetry in muon capture (Refs. 11-13) are not sufficiently accurate to give conclusive information on the μ capture theory adopted in this paper. The author expresses his gratitude to Doctor Chou Huang-chao for assistance and advice during his stay at the J.I.N.R. (Joint Institute of Nuclear Research). There are 1 figure and 13 references: 3 Soviet, 8 US and 2 Italian.

ASSOCIATION: Institute of Physics Polish Academy of Sciences, Warsaw

SUBMITTED: January 31 1960

Card 2/2

ACCESSION NR: AP4015993

P/0047/83/014/008/0659/0665

AUTHOR: Majewski, Witold

TITLE: On the work of the Electron Physics Department of the Warsaw Polytechnic School

SOURCE: Postepy fizyki, v. 14, no. 6, 1963, 659-665

TOPIC TAGS: organic semiconductor, organic insulator, organic dielectric, dielectric loss, organic thermistor, organic photoresistor, anthracene, hexanitroazobenzene, nitroanthraquinone, polystyrene insulator, resin dielectric, electric conduction mechanism

ABSTRACT: After a brief history of his association since 1921 with the Experimental Physics Laboratory of the University of Warsaw, and an account of the pedagogical and research activities of the director of this laboratory, Prof. Stefan Pienkowski, the author describes the work of the Electron Physics Department, organized in 1946. The research interests of the department are centered on organic aromatic and macromolecular compounds which may find practical applications as insulators, thermistors and photoresistors of high resistivity. The measurements were initially designed to obtain temperature curves of dielectric loss (alternating-current

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ACCESSION NR: 'AP4015993'

measurements) and temperature curves of ohmic resistance (direct-current measurements) for aromatic compounds. The substances investigated were either nonpolar (anthracene) or polar (aromatic derivatives of hexanitroazobenzene and nitroanthraquinone). On the basis of the results cited in the article, the organic substances currently investigated are: (1) substances whose dielectric loss increases exponentially with the temperature and (2) substances in which no exponential changes in dielectric loss with temperature have been observed. Group 1 includes aromatic crystals, anthracene, and hexanitroazobenzene (classified as organic semiconductors in the literature), and solid solutions of certain macromolecular compounds. Group 2 includes the macromolecular compounds studied, mixtures of polystyrene with resins and mechanical mixtures of resins.

ASSOCIATION: Politechnika Warszawska Katedra Fizyki Elektronowej (Department of Electron Physics, Warsaw Polytechnic School)

SUBMITTED: 00

DATE ACQ: 03Feb64

ENCL: 00

SUB CODE: PH

NO REF SOV: 003

OTHER: 011

Card 2/2

Majority, 1970, 1971, 1972, 1973

1. The majority of the population of the United States is white. The majority of the population of the United States is white. The majority of the population of the United States is white.

L 51095-65 EWT(2)/EEC-4 Pac-A
ACCESSION NR: AT5011789

PO/2516/64/000/037/0075/0086

15
14
B+1

AUTHOR: Majewski, W. (Jr.)

TITLE: Two-way distribution points

SOURCE: Warsaw. Politechnika. Zeszyty naukowe, no. 96, Elektryka, no. 37, 1964, 75-86

TOPIC TAGS: teletransmission line, distribution point, conference call circuit

ABSTRACT: The paper discusses the fundamental circuit used in teleconference systems. The theoretical bases of circuits making it possible to transmit messages in both directions in two lines (one line for each direction) are presented together with the principles governing the selection and design of such circuits, i. e., two-way distribution points. The fundamental relations of a parallel-connected two-way distribution point are derived. Two such circuits are discussed, one using triodes, shown in Figure 1 of the Enclosure, and the other using pentodes, shown in Figure 2 of the Enclosure. Analysis of these two circuits has shown that optimal operating conditions can be achieved using pentodes while such conditions cannot be established with triodes. Using pentodes, the gain obtained can be quite high. Transistors can be employed in parallel circuits and, since transistor characteristics resemble those of pentodes, optimal operating conditions can also be established. Analysis of the series-connected two-way distribution point employing triodes, shown in

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Figure 3 of the Enclosure, has shown that the resistance loading the tube is much higher than the internal tube resistance, this being of advantage in minimizing nonlinear distortion. In this circuit, the anode voltage is much higher than in the parallel circuit. A series-connected circuit without the use of transformers is also discussed. The circuits discussed are compared and some numerical data pertaining to their operation are tabulated. The analysis and the numerical data show that, from the standpoint of performance and economy, the optimal circuit is the parallel-connected circuit using a double-triode without additional loading resistance and employing negative feedback in the cathode circuit. This conclusion is corroborated by a detailed discussion. The series-connected two-way distribution point is impractical because of economic considerations (it requires too many transformers). The parallel-connected circuit is also not recommended for reasons of economy; it requires too many tubes although its performance is superior to that using triodes. Several versions of two-way distribution points were developed in the Katedra Teletransmisji Przewodowej Politechniki Warszawskiej (Department of Guided Teletransmission of Warsaw Polytechnic Institute), and the results obtained corroborated the analytical conclusions reached in the paper. Orig. art. has: 5 figures, 1 table and 31 formulas.

ASSOCIATION: Katedra Teletransmisji Przewodowej Politechniki Warszawskiej (Guided Teletransmission Department, Warsaw Polytechnic Institute)

Card 2/6

L 51095-65

ACCESSION NR: AT5011789

SUBMITTED: 20Sep63

ENCL: 03

SUB CODE: EC

NO REF SOV: 000

OTHER: 000

Card 3/6

MAJCHYT, WLADYSLAW.

Projektowanie telefonicznych sieci miejscowych i okręgowych. (Wyd. 1. /
Warszawa, wydawn. Komunikacyjne, 1954. 33s. : . (Designing local and district
telephone networks. 1st ed. bibl., diagrams, graphs, index)

So. East European Accessions List Vol. 5, No. 1, Jan. 1956

MAJEWSKI, Włodzimierz, mgr., inż.

Computation of cross-curves for the stability of ships with recessed ramps by electronic calculating machines. Bud okretowe Warszawa 7 no.2:61-62 '62.

1. Centralne Biuro Konstrukcji Okretowych Nr.1, Gdansk

MAJEWSKI, Wojciech

Hydraulic model research on the cooling water circulation in river system. Rozprawy hidrotechn no.9:13-35 '61.

MAJEWSKI, Wojciech, mgr., inż.

Hydraulic model investigations on the outlet sluice of the cascade
near the town of Tresna. Gosp wodna 21 no.12:537-539 D '61.

1. Zaklad Budownictwa Wodnego Srodladowego, Instytut Budownictwa Wodnego,
Gdansk.

MAJEWSKI, Wojciech, mgr inż.

Research based on models in hydraulic laboratories in Yugoslavia.
Gosp wodna 22 no.9:427-428 S '62.

1. Pracownia Hydraulicznych Badan Modelowych, Instytut
Budownictwa Wodnego, Polska Akademia Nauk, Warszawa.

MAJEWSKI, Wojciech, mgr inz.

Model testing in hydraulic laboratories in Yugoslavia.. Gosp. wodna 22
no.10:473-474 0 '62.

1. Pracownia Hydraulicznych Badan Modelowych, Instytut Budownictwa
Wodnego, Polska Akademia Nauk, Gdansk.

MAJEMSKI, Wojciech

Model studies on discharge coefficients of spillway devices.
Rozpr hydrotechn no.12:21-28 '62.

JASIEWICZ, Romuald, dr inż.; RADZIKOWSKI, Adam, doc. dr inż.; MANTHEY, Tadeusz, dr inż.; PIETKA, Zenon, dr inż.; KAJETANOWICZ, Zbigniew, prof. dr inż.; MAJEWSKI, Wojciech, mgr inż.; KORDAS, Bolesław, mgr inż.; JACENKOW, Bolesław, mgr inż.; ZMIGRODZKI, Zbigniew, prof. dr inż.; MIKUCKI, Zygmunt, doc. dr inż.; SOBIERAJ, Jerzy, mgr inż.

Discussions on papers and communications. Rozpr hydrotechn no.12: 49-64 '62.

1. Technical University, Warsaw (for Jasiewicz, Zmigrodzki, Mikucki).
2. Technical University, Szczecin (for Radzikowski).
2. Research Institute of Hydraulic Engineering, Polish Academy of Sciences, Gdansk (for Manthey, Majewski, Jacenow, Sobieraj).
4. State Hydrological and Meteorological Institute, Warsaw (for Pietka).
5. Technical University, Krakow (for Kajetanowicz, Kordas).

MAJEWSKI, Wojciech, mgr inż.

The hydraulic laboratory in Wallingford. Gosp wodna 23 no.11:
439-440 N°63.

MAJEMSKI, Wojciech, MFR 103.

Phenomena of density differences with particular consideration of
the stratified cases. Soc; wojna 2, no.10; Suppl: Biol inst. sci. wojna
5 no.5:391-392 10 '64.

1. Department of Internal Hydraulic Engineering, Institute of Hydraulic
Engineering, Polish Academy of Sciences, Gdansk.

MA. EWSKI, Wojciech, mgr inz.; MANTHEY, Tadeusz, dr inz.

Tenth Congress of the International Hydraulic Research Association,
London, September 1-5, 1963. Gosp wodna 24 no. 5:182-183 My '64.

1. Institute of Hydraulic Engineering, Polish Academy of Sciences,
Gdansk.

MAJEWSKI, Wojciech, mgr inż.; KARATNICKA, Elzbieta, mgr inż.

Velocity distribution in open channels and determination of the α and β coefficients. Gosp wodna 25 no.2:79-82 F '65.

1. Institute of Hydraulic Engineering, Gdansk, of the Polish Academy of Sciences (for Majewski) 2. Institute of Soil Improvement and Grasslands, Warsaw (for Karatnicka).

POLAND/General and Specialized Zoology - Insects. Harmful
Insects and Acarids. Forest Pests.

P

Abs Jour : Ref Zhur Biol., No 6, 1959, 25498

Author : Majewski, Z.

Inst :

Title : The Developmental Process of Secondary Pests in the
Growing Stock of Trees after a Fire.

Orig Pub : Las polski, 1958, 32, No 2, 1-11

Abstract : In 1954, observations were conducted on sections of a
pine forest (about 100 hectares). The grey long-antenna
long-horned beetle (*Acanthocinus aedilis*) was the first
to appear on the singed young trees (without infesting the
middle-aged and older groups). The large forest gardener
(*Blastophagus piniperda*) began to settle on the damaged
trees of the middle group, but its passages were clogged
with sap. The weevil (*Strophosonus obesus*) and the spon-
dyle long-horned beetle (*Spondylis buprestoides*) began

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POLAND/General and Specialized Zoology - Insects. Harmful
Insects and Acarids. Forest Pests.

P

Abs Jour : Ref Zhur Biol., No 6, 1959, 25498

to settle rapidly on the trees perished by the fire. The metallic wood-borer (*Melanophila acuminata*) and the pine beetle (*Pissodes piniphilus*) developed on masses on fallen branches and tops of the trees. The numbers of the bark beetles (BB) of the large forest gardener, of the striped ambrosia (*Trypodendron (Xyloterus) lineatum*), of the spruce beetle (*Crypturgus pusillus*), of *Orthotomiscus suturalis*, of *Ips sexdentatus* and others grew rapidly by next spring. The composition of secondary pests (P) changed slightly in the following year. The conducted investigations permit to make the following deduction: A complex of P, in which one or more species predominate, develop in forests that suffered from fire. The propagation outbreaks of secondary P result from a sudden infestation with subsequent growth and its abatement, the degree of infestation depending upon the state of health.

Card 2/3

POLAND/General and Specialized Zoology - Insects. Harmful
Insects and Acarids. Forest Pests.

P

Abs Jour : Ref Zhur Biol., No 6, 1959, 25498

of the neighboring trees. The species composition of
P changes, BB playing the dominant role. The effect of
the fire is also expressed by the development of primary
P on neighboring trees. The part played by birds, para-
sites and predators is minimal. -- D.P. Dovnar-Zapod'skiy

Card 3/3

- 43 -

MAJEWSKI, Z., mgr inz.; MICHALOWSKI, M., dr inz.; MIKULSKI, J.,
dr inz.

Individual index of heat consumption of open-hearth furnaces.
Hutnik P 30 no. 5: 143-147 My '63.

MAJENSKI 7.1.1962

PODLE: 1. 1. 1962, 1. 1. 1962, 1. 1. 1962

1. 1. 1962, 1. 1. 1962, 1. 1. 1962, 1. 1. 1962

1. 1. 1962, 1. 1. 1962, 1. 1. 1962, 1. 1. 1962

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1. 1. 1962, 1. 1. 1962, 1. 1. 1962, 1. 1. 1962

1. 1. 1962, 1. 1. 1962

1. 1. 1962, 1. 1. 1962, 1. 1. 1962, 1. 1. 1962

1. 1. 1962, 1. 1. 1962

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MAJEWSKI, Z., BROCHOCKI, A.

"The influence of contact pressure on the characteristics of the silicon-tungsten contact point arrangement." p. 325. (ARCHIWUM ELEKTROTECHNIKI Vol. 2, No. 3/4. 1953. Warszawa, Poland)

SO: Monthly List of East European Accessions. (EEAL). LC. Vol. 4. No. 4. April 1955. Uncl.

MAJEWSKI, Z.

"The influence of the ambient temperature and current load on the reverse characteristics of the silicon-tungsten contact point arrangement." p. 328.
(ARCHIWUM ELEKTROTECHNIKI Vol. 2, No. 3/4, 1953. Warszawa, Poland)

SO: Monthly List of East European Accessions. (EEAL). LC. Vol. 4, No. 4.
April 1955. Uncl.

MAJEWSKI, Z.

POL. -

3357

621.34.033 : 621.315-50

Majewski Z. Non-Linear Semi-Conductors.

"Półprzewodnikowe elementy nieliniowe", (Prace Przem. Inst. Telekom. No. 11), Warszawa, 1951, PWT, 10 pp., 27 figs.

The paper outlines the present state of crystal-diode technique. It comprises, in particular, the theoretical principles of operation, electrical features and design topics of crystal diodes. The paper also gives consideration to certain problems pertaining to the technology of silicon and germanium.

BB

LM

6

MAJEWSKI, Z; KLAMKA, J.

Electrolytic spot etching of germanium. p. 379. ARCHIWUM ELEKTROCHEMII.
Warszawa. Vol. 4, no. 2, 1955

Source: East European Accessions List, (EEAL), Lc, Vol. 5, No. 3, March, 1956

MAJEWSKI, Z.; BROCHOCKI, A.; KLAMKA, J.

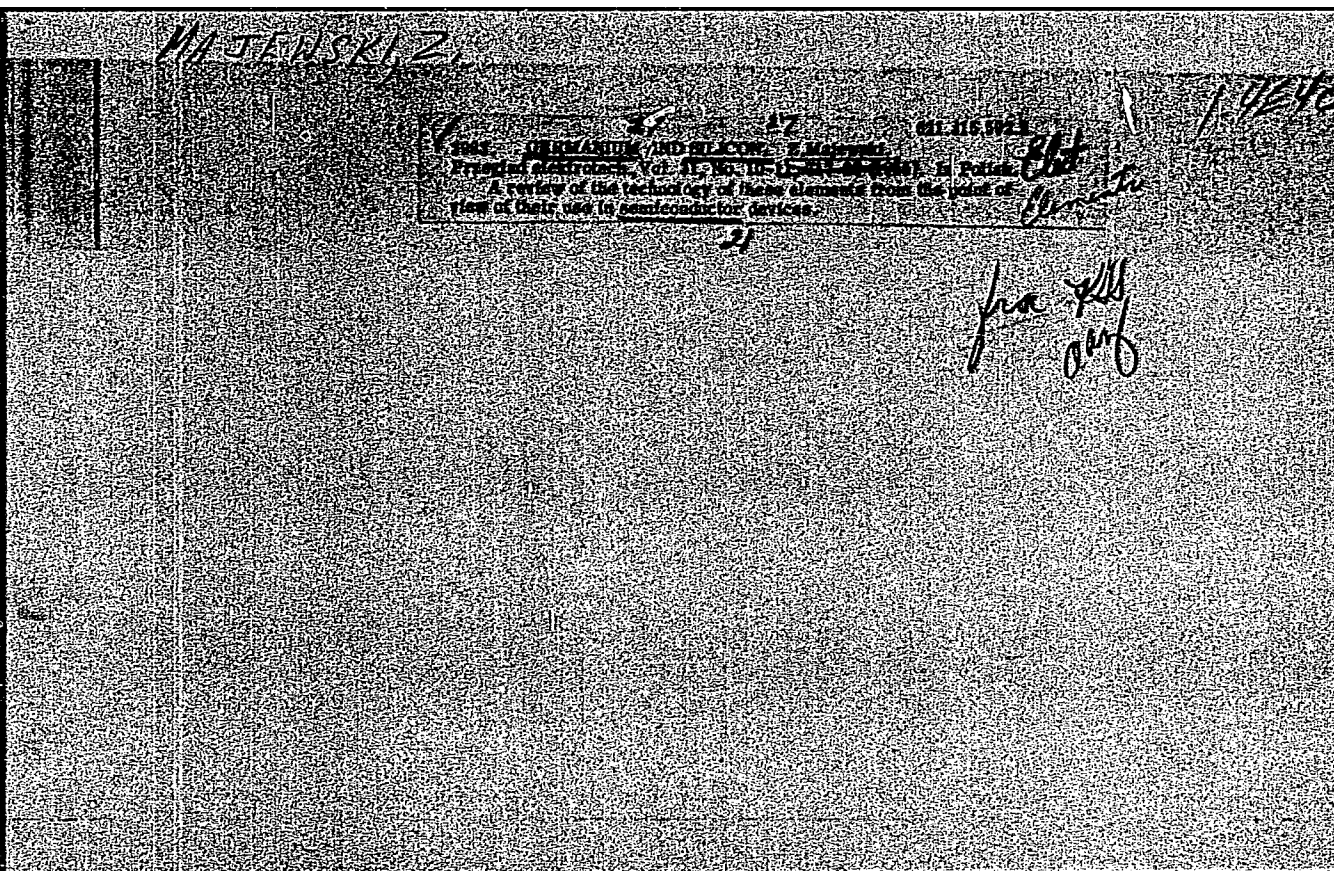
Influence of the zone melting of germanium upon the inverse voltage of the germanium-tungsten contact system. p. 194. ARCHIWUM ELEKTROTECHNIKI. Vol. 4, no. 2, 1955 Warszawa.

Source: East European Accessions List, (EEAL), Lc, Vol. 5, No. 3, March, 1956

MAJEWski, Z.

"Germanium Diodes", p. 2, (PRZEMIAŁ TŁOKOWY, Vol. 28, No. 1, Jan. 1955, Warszawa, Poland)

SO: Monthly List of East European Accessions, (YEWL), LC, Vol. 4, No. 6, May 1955, Uncl.



POLAND / Chemical Technology, Chemical Products and Their
Application. Elements. Oxides. Mineral Acids.
Bases. Salts.

H-8

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 15982

Author : Majewski, Z.

Inst : Not given

Title : Vacuum Techniques Applied to Germanium

Orig Pub : Arch. elektrotechniki, 1956, 5, No 4, 769-779

Abstract : A description of process techniques in the obtaining of
metallic Ge of semi-conducting properties from the native
(PDR) germanium oxide under laboratory conditions is given.
The germanium oxide is reduced in the H_2 stream at 5400°
with a 95% yield. The powdery Ge thus obtained is fused at
 1050° . Impurities present (in wt%) are: 0.3 - S, 0.42 - P,
2.3 - SiO_2 , 0.1-0.01 - Ca and Al. The resistance of Ge
after the single remelting and etching with the $HF-HNO_3$

Card 1/2

MAJEWY, Z.

Materials for electronics; a report of the 8th Section of the Polish Academy of Sciences at the Conference on Raw and Processed Materials in the Field of Electrotechnics, Breslaw, December 13-15, 1956.

P. 43: (Przegląd Elektrotechniczny, Vol. 32, no. 10. Oct. 1956, Warszawa, Poland)

Monthly Index of East European Accessions (EMAI) LC. Vol. 7, no. 2,
February 1958

9(4)

PHASE I - EXPLOITATION POI '2741

Majewski, Zdzisław

Wstęp do elektroniki półprzewodników (Introduction to Semiconductor Electronics)
Warsaw, PWN, 1958. 158 p. Errata slip inserted. 1,000 copies printed.

Sponsoring Agency: Polska akademia nauk. Instytut podstawowych problemów
techniki.

General and Tech. Ed.: Kazimiera Galńska.

PURPOSE: The book is intended for students of Polytechnical Institutes and for
specialists in electronics.

COVERAGE: This book is an attempt at a systematic presentation of the funda-
mentals of semiconductor theory. He cites the book of R.D. Middlebrook, "An
Introduction to Junction Transistor Theory" and the book of W.C. Dunlap, "An
Introduction to Semiconductors", as the best examples of a systematic presenta-
tion of the subject in non-Polish literature. The author intends to treat the
following problems, which are omitted in this book, in a future edition: the

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Introduction to (Cont.)

POL/2741

theory of p-n junction, electron emission, luminescence, the defects of crystal lattice (in particular the dislocations), optical and photoelectric phenomena in semiconductors and surface effects. He thanks Professor Doctor Janusz Groszkowski, Docent, Bohdan Paszkowski and Stanislaw Sikorski, Master in Engineering for their suggestions. He also thanks Professor Włodziniez Scisłowski and Mikosz Chmielewski, Master in Engineering for reviewing the manuscript. There are 32 references: 4 Polish, (8 of which are translations) 14 English and 6 German.

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Electric Conductivity of Metals and Semiconductors

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Minority Carriers

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Barrier phenomena

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AVAILABLE: Library of Congress (TK7872.S4M25)

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JP/jb
12-29-59

POLAND/Electronics - Photocells and Semiconductor Device.

H

Abs Jour : Ref Zhur Fizika, No 11, 1959, 25561

Author : Majewski, Zdzislaw

Inst : ~~_____~~

Title : Development of Semiconductor Electronics. Part I.

Orig Pub : Elektronika, 1958, 4, No 6, 202-221

Abstract : Popular survey of the accomplishments in the fields of physics and semiconductor technology since 1946.

Card 1/1

PHASE I BOOK EXPIRATION

500/444

Sovetskoye po poluprovodnikovym materialam. Moscow, 1947.
 Voprosy metallurgii i fiziki poluprovodnikov. Izdat. 1-40. Sovetskoye po
 fizike i matematike. Moscow, 1947. 120 p. Errata slip
 inserted. 3,200 copies printed.

Sponsoring agency: Academy of Sciences USSR, Institute of Metallurgy (Soviet
 Academy of Sciences, Moscow, U.S.S.R., Editor: B. K. Abrikosov, Doctor of Chemical Sciences;
 Editor of Publishing House: P. F. Zolotarev.

PURPOSE: This collection is intended for technical and scientific personnel
 concerned with the investigation and production of semiconductor materials.
 It may also be used by students in schools of metallurgy.

COVER: The collection contains reports submitted at the Third Conference
 on Semiconductor Materials, held at the Institute of Metallurgy (Soviet
 Academy of Sciences, Moscow, U.S.S.R., May 1947. The reports deal with problems
 of obtaining and investigating germanium, silicon, and semiconductor com-
 pounds. The collection was first edited by D. A. Petrov, Doctor of
 Technical Sciences. References accompany most of the reports.

Galevsky, V. V. On the Problem of the Role of Some Factors in the
 Growth Process of Single Crystals from a Melt. 23

Polyakov, E. B. Investigation of Role of Diamond-Type Crystals
 in the Theory of the Multilayered Semiconductor Theory 29

Safegul, Academician (Academy of Sciences, Hungarian People's Republic).
 Concerning the Problem of Semiconductor Point-Contacts 40

Wolanski, Z. (Institute of Basic Technical Problems, Polish Academy of
 Sciences, Warsaw, Poland). Properties of P-N Junctions in Germanium Single Crystals
 Withdrawn from the Melt by Pulling 43

Goswami, L. (Institute of Physics, Polish Academy of Sciences).
 Effect of the Introduction of Minority Current Carriers on Light Re-
 flection from Germanium 49

Bugay, A. A., V. Ye. Isenkov, and Ye. G. Mikhaylov. Diffusion and Solu-
 bility of Iron and Silver in Germanium 52

Pyatkin, A. P., and P. A. Pivovarov. Investigation of Melting of
 Semiconductors with Salt 57

Vasil'yevskiy, I. N., and Ye. G. Mikhaylov. Investigation of Segregation
 and Solubility of Some Impurities in Germanium During Crystallization 62

Trounits, (Institute of Technical Physics, Czechoslovak Academy of
 Sciences). Problems of Obtaining Pure Silicon 68

Petrov, D. A., Ye. M. Shalov, V. V. Rodchikovskiy,
 Ye. G. Mikhaylov, and I. D. Evdoshenko. Solubility of Silicon Single-
 Crystals 69

Baling Teaching (Institute of Applied Physics, Chinese People's
 Republic). Importance of Using Pure Water for Washing Materials Used
 in Semiconductor Engineering 78

Abukharov, G. B., M. I. Aliev, A. A. Bakhvalov, and G. M. Aliev.
 Effect of Halide Impurities on the Physical Properties of Selenium 80

Abukharov, G. B., G. A. Aliev, A. A. Bakhvalov, and Z. A. Aliev.
 On the Diffusion of Certain Metals in Polycrystalline Selenium 89

Dudko, L. D., and S. Ye. Artyukov. Problems of Alloying Selenium-
 Germanium Alloy 94

Mikhailov, I. B., M. I. Aliev, and V. D. Puzanov. Effect of
 Growth Conditions of Single Crystals of GeS and TeSe on their Physical
 Properties 107

Trofimov, A. P., and G. A. Pedonov. Effect of Temperature and Certain
 Impurities on the Dark Resistance and Photoconductivity of GeS Single
 Crystals 112

Sel'man, L. (Institute of Technical Physics, Czechoslovak Academy of
 Sciences). Semiconductor Compounds with an Increase of One of the Com-
 ponents 117

Shchegolev, V. P. Effect of Surface Condition on the Electrical Properties
 of Type II-VI Compounds 120

Petrov, V. A., M. A. Krivor, V. M. Veronobov, A. G. Gilev, and
 Ye. V. Mikhaylov. Production and Investigation of New Semicon-
 ductor Materials 127

AVAILABLE: Library of Congress

Card 5/5

AP/40/08
 3/20/61

POLAND/Electronics - Semiconductors.

H-

Abs Jour : Ref Zhur Fizika, No 3, 1960, 6422

Author : Majewski, Z., Sikorski, S., Swiderski, J.

Inst : -

Title : On the Relation Between Anomalous Resistivity and Concentration Gradient of Carriers in Germanium

Orig Pub : Bull. Acad. polon. sci. Ser. sci. techn., 1959, 7, No 6, 401-406

Abstract : In the measurements of the specific electric resistivity of Ge by the two-probe method, the results are considerably higher than the specific resistivity of pure Ge. These anomalous values of the resistance depend on the voltage and on the direction of the current used in the measurements. It has been noted that this phenomenon is accompanied by the appearance of a volume photo-emf the behavior of which is connected with a character of the nonlinearity of the specific electric resistivity, and it

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POLAND/Electronics - Semiconductors.

H-

Abc Jour : Ref Zhur Fizika, No 3, 1966, 6422

cannot be explained with the aid of the Lashkarev-Ramanz theory (Referat Zhur Fizika 1957, No 3, 7045) or the Tautz theory (Referat Zhur Fizika 1955, No 11, 24903). Investigations have been made, indicating the appearance of injection of minority carriers from one portion of the inhomogeneous specimen of germanium to another. An hypothesis is advanced that this is the essential reason for the occurrence of anomalous values of resistance. The application of measurements of the photo-emg for simple identification of the sections of anomalous resistance is proposed.

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MAJEWSKI, Zdzislaw; KAZIMIERSKI, Adam

Radiation detectors. Przegl elektroniki 3 no.3:114-119 Mr '62

P/053/63/000/003/003/003
E192/E382

AUTHORS: Majewski, Zdzisław and Wójcik, Maria

TITLE: Investigation of the influence of surface recombination on the transient operation of a p-n junction

PERIODICAL: Przegląd elektroniki, no. 3, 1963, 163 - 167

TEXT: Ge-In junctions, the construction of which is illustrated in Fig. 1, were investigated. The Ge surface opposite the junction inside the Ni ring of the base was used as the recombination contact of the base. Changes in the Ge surface were induced either by gradual etching in boiling H_2O_2 or by sanding. This latter operation was performed by rubbing the surface with cotton wool wetted in fine carborundum paste or by a high-pressure water jet containing carborundum powder. The switching operation of the junction can be described either by measuring the charge accumulated in the near-junction area or by measuring the dependence of the inverse current after rapidly switching off the voltage from a junction which was conducting in the forward direction. It is shown that for a thin base the relationship between the transient or the switching parameter and the surface

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P/053/63/000/003/003/003
E192/E382

Investigation of

recombination velocity s is defined by:

$$\frac{1}{\tau_{ef}} = \frac{1}{\tau_p} + A_t \cdot \frac{s}{w} \quad (4)$$

where $\tau_{ef} = \Delta Q_s / \Delta I_p$ is the effective lifetime of the holes in the base (where ΔQ_s is the charge stored in the near junction region and ΔI_p is the conduction current prior to the switching-off), τ_p is the volume lifetime of the holes in the base and w is the thickness of the base. The constant in Eq. (4) is expressed by:

$$A_t = \frac{w}{L_p} \frac{1}{\sinh \frac{w}{L_p}} + \frac{sL_p}{D} \left(\cosh \frac{w}{L_p} - 1 \right) \quad (5)$$

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where L_p is the diffusion path of the holes in the n-region and D_p is the diffusion constant for the holes. Eq. (4) was used to investigate the possibility of determining the surface recombination velocity s from the stored-charge measurements. It was found that, in general, s , determined by this method, differed quite significantly from the results measured by the photoelectric method. However, this discrepancy can be eliminated if the constant A_1 in Eq. (4) is determined experimentally for various values of w/L_p and various junction configurations. There are 6 figures and 1 table.

ASSOCIATION: Zaklad Elektroniki IPPT-PAN
(Electronics Laboratory, IPPT-PAN)

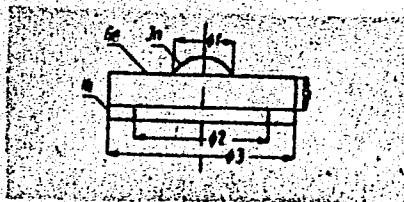


Fig. 1:

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L 10771-63 EWT(1)/BDS/EED-2--AFFTC/ASD/AFGC/AFWL--FI-4
ACCESSION NR: AP3003186 P/0053/63/000/004/0251/0254

AUTHOR: Majewski, Zdzislaw; Ambroziak, A.; Swiderski, J.

TITLE: Detection of infrared radiation using gold-doped germanium

SOURCE: Przegląd elektroniki, ⁴no. 4, 1963, 251-254

TOPIC TAGS: infrared radiation detector, gold-doped germanium, photoconductivity measurement

ABSTRACT: Problems arising in the design of infrared detectors based on the photoconductivity of gold-doped germanium, problems connected with the gold doping of germanium, photoconductivity measurements, and the selection of detector windows and cooling systems are described. The selection of a properly doped germanium sample was accomplished by measuring the resistivity of the sample as a function of temperature in the range from 78 to 300K. A special photoconductivity meter was developed for this purpose. In addition to the properly prepared germanium sample, some preliminary improvements such as an amplifier suitable for use with a specific sample and of an improved shielding system, make it possible to detect greatly reduced power. A model of the detector is shown in Fig. 1 of the Enclosure. The inner glass cylinder of the

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ACCESSION NR: AP3003186

detector is filled with liquid nitrogen, has a kovar base and maintains a temperature of 78K for 20 minutes. The pressure on the germanium sample is less than 10^{-3} mm Hg. The windows are made of pure germanium plates with highly polished surfaces. Special windows made of lithium fluoride (imported from the USSR) permit passage of visible light and infrared radiation of 6 microns. Orig. art. has: 5 figures.

ASSOCIATION: Instytut Podstawowych Problemów Techniki Polska Akademia Nauk
(Institute of Basic Technical Problems, Polish Academy of Sciences)

SUBMITTED: 00

DATE ACQ: 12Jul63

ENCL: 01

SUB CODE: 00

NO REF SOV: 000

OTHER: 002

Card 2/32

MAJEWSKI Zdzislaw , WOCIEK, Maria

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(Phytosphingosine)		

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(BRAIN, wounds and injuries,

EEG)

(WOUNDS AND INJURIES,

EEG)

(ELECTROENCEPHALOGRAPHY, in various diseases,
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prof. dr I. Hausmanowa.

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(REFLEX, CONDITIONED

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(ELECTROENCEPHALOGRAPHY

bioelectric activity in cond. reflexes in rabbit)

HAUSMANOWA, Irena; WARECKA, Krystyna; MAJKOWSKI, Jerzy (przy udziale
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(NERVOUS SYSTEM, diseases.
ther., ACTH)

(ACTH, therapeutic use,
nervous system dis.)

EXCERPTA MEDICA Sec 18 Vol 3/8 Cardio. Dis. Aug 59

2169. A case of total cortical blindness in the course of thromboangiitis obliterans
Przypadek całkowitej ślepoty korowej w przebiegu zakrzepowo-zarostowego zapalenia
naczyn. MAJKOWSKI J. Klin. Neurol. A. M., Warszawa Neurol. Neurochir. psychiat.
pol. 1957, 7 3 (333-345) Graphs 4 Illus. 2

The case is reported of a 53-year-old man affected with bilateral simultaneous cortical blindness in the course of thromboangiitis obliterans. The characteristic changes in the blood vessels developed in the lower extremities (dorsal arteries of the foot) and in the cerebrum. The first pathological symptoms in the form of gangrenous changes in the toes appeared in the patient's 49th year. He did not notice the moment of the onset of blindness and did not realize his disability (visual agnosia). On the 17th day of the illness a sensation of light developed in the left eye. A few days later this eye distinguished the movement of objects. Finally the patient saw very faintly and recognized objects at close range. An absence of light perception persisted in the right eye during the entire 3-month period of observation. Two differential diagnostic problems, differing from the aetiological point of view and with respect to the localization of the pathological process responsible for blindness are discussed. Following a detailed analysis of the pathological symptoms it is concluded that the thrombotic changes developed in both calcarine arteries, re-

2169

sulting in bilateral injury to Brodmann's area 17 (area striata). In aetiological differential diagnosis arteriosclerosis obliterans is considered but rejected. During the patient's 3 months' stay in hospital the ocular fundus and pupil reflexes to light never showed any abnormality. ECGs are given.
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(REFLEX, CONDITIONED,
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 EEG, activation with pentylenetetrazole (Pol))
(ELECTROENCEPHALOGRAPHY, eff. of drugs on
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(PARALYSIS)

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(PARALYSIS blood)
(POTASSIUM blood)

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Kierownika: prof. dr Irena Hausmanowa-Petrusewicz (Przedstawili: prof.
dr med. Janina Hurynowicz, prof. dr med. Włodzimierz Missiuro)

(REFLEX CONDITIONED) (ELECTROENCEPHALOGRAPHY)
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